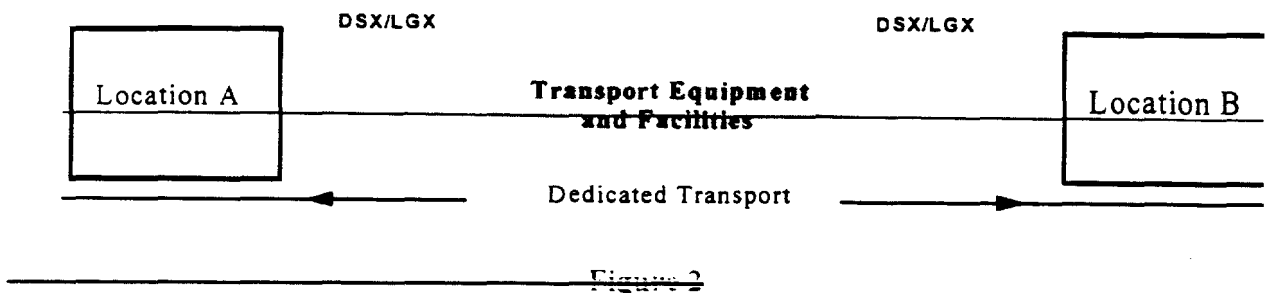at mutually agreed locations. Dedicated Transport is depicted in Figure 2.



Figure 2

10.1.2 Bell Atlantic shall offer unbundled and Non-Discriminatory access to Dedicated Transport, as a circuit (e.g., DS0 (voice grade), DS1, STS1 when available) and DS3, dedicated to MCIm.

10.1.3 When Dedicated Transport is provided as a circuit, it will have available (as appropriate):

10.1.3.1 Optional multiplexing functionality;

10.1.3.2 Grooming functionality in accordance with Section 10.3 herein; and,

10.1.3.3 Redundant equipment and facilities necessary to support protection and restoration at Parity and in a Non-Discriminatory manner.

10.1.4 Bell Atlantic shall provide MCIm with use of all Technically Feasible transmission facilities, functions, and capabilities of Dedicated Transport that MCIm could use in the provision of telecommunications services.

10.1.4.1 Bell Atlantic shall provide MCIm exclusive use of Dedicated Transport facilities, features, functions, and capabilities.

10.1.4.2 Bell Atlantic shall permit, to the extent Technically Feasible, MCIm to connect Dedicated Transport to equipment designated by MCIm, including, but not limited to, MCIm's collocated facilities.

## 10.2 Technical Requirements

This Section sets forth technical requirements for all Dedicated Transport.

10.2.1 Dedicated Transport shall provide physical diversity at Parity.

10.2.2 MCIm may request that Bell Atlantic provide additional physical diversity. Bell Atlantic will provide such physical diversity where it is available, at Bell Atlantic's prevailing additional charge, if any. If physical diversity is not reasonably available in response to MCIm's request, then MCIm may order such additional physical diversity by submitting a request for special construction.

10.2.3 Dedicated Transport shall include DSX terminations at one or both ends, as applicable, in Bell Atlantic's Central Office location.

10.2.4 Bell Atlantic shall offer DCS and multiplexing, both together with and separately from Dedicated Transport.

**10.3 Digital Cross Connect System ("DCS").** At a minimum, Bell Atlantic shall permit MCIm, to the extent Technically Feasible, to obtain the functionality provided by Bell Atlantic's DCS in the same manner that Bell Atlantic provides such functionality to interexchange carriers.

**10.3.1 Definition.**

DCS is a device which provides electronic cross-connection of digital signal level 0 ("DS0") or higher transmission bit rate digital channels within physical interface facilities. Types of DCSs include but are not limited to DCS 1/0s, where the nomenclature 1/0 denotes interfaces typically at the DS1 rate or greater with cross-connection typically at the DS0 rate.

**10.3.2 DCS Technical Requirements**

10.3.2.1 DCS shall provide cross connection of the channels designated by MCIm, either through service orders or by using Bell Atlantic's Intellimux capabilities.

10.3.2.2 Bell Atlantic shall continue to administer and maintain DCS, including updates to the control software to current available releases, at Parity.

10.3.2.3 Bell Atlantic shall provide various types of Digital Cross Connect Systems including:

10.3.2.3.1 DS0 cross connects (typically termed DCS 1/0).

10.3.2.3.2 Additional DCS types shall be requested in accordance with the BFR process set forth in Section 25 of Part A of this Agreement.

10.3.2.4 Through Bell Atlantic's Intellimux service capabilities, Bell Atlantic shall provide immediate and continuous configuration and reconfiguration of the channels between the physical interfaces (*i.e.*, Bell Atlantic shall establish the processes to implement cross connects on demand, or permit MCIm control of such configurations and reconfigurations).

10.3.2.5 Through Bell Atlantic's Intellimux service capabilities, Bell Atlantic shall provide scheduled configuration and reconfiguration of the channels between the physical interfaces (*i.e.*, Bell Atlantic shall establish the processes to implement cross connects on the schedule designated by MCIm, or permit MCIm to control such configurations and reconfigurations).

10.3.2.6 DCS shall continuously monitor protected circuit packs and redundant common equipment at Parity.

10.3.2.7 DCS shall automatically switch to a protection circuit pack on detection of a failure or degradation of normal operation at Parity.

10.3.2.8 The equipment used to provide DCS shall be equipped with a redundant power supply or a battery back-up at Parity.

10.3.2.9 Bell Atlantic shall make available for DCSs handling MCIm services spare facilities and equipment at Parity, necessary for provisioning repairs.

10.3.2.10 Through Bell Atlantic's Intellimux service capabilities, at MCIm's option, Bell Atlantic shall provide MCIm currently available performance monitoring and alarm data.

10.3.2.11 At MCIm's option, Bell Atlantic shall provide MCIm with the ability to initiate tests on DCS equipment. This will require MCIm to provide additional facilities from the DCS, back to MCIm's test center. The DCS can then be used to connect MCIm's test center ports to other MCIm circuits.

10.3.2.12 Where available, DCS shall provide multipoint bridging of multiple channels to other DCSs. MCIm may designate multipoint bridging to be one-way broadcast from a single master to multiple tributaries, or two-way broadcast between a single master and multiple tributaries.

10.3.2.13 DCS shall multiplex lower speed channels onto a higher speed interface and demultiplex higher speed channels onto lower speed interfaces as designated by MCIm.

## Section 11.  Signaling Link Transport

### 11.1  Definition:

11.1.1  Bell Atlantic's CCS Access Service ("CCSAS") allows interconnected carriers to exchange signaling information over a communications path which is separate from the message path.  The transport portion of CCSAS is provided via a discreetely rated dedicated 56 kbps out of band signaling connection between the carrier's Signaling Point of Interconnection ("SPOI") and Bell Atlantic's STP.

11.1.2  Each CCSAS signaling connection provides for two-way digital transmission at speeds of 56 kbps.  The connection to Bell Atlantic's STP pair can be made from either the carrier's signaling point ("SP"), which requires a minimum of two 56 kbps circuits, or from the carrier's STP pair, which requires a minimum of four (4) pairs of 56 kbps circuits.

11.1.3  STP locations are set forth in National Exchange Carrier Association ("NECA") Tariff F.C.C. No. 4.  Carriers ordering CCSAS are subject to the technical requirements specified in Bell Atlantic Tariff F.C.C. No. 1, Sections 2.3.9.1, 2.3.10 (B) (9) and 2.3.10 (9).  Testing and certification reference documentation shall be pursuant to Bell Atlantic Tariff F.C.C. No. 1, Section 6.4.3 (A).

11.1.4  Each Party shall provide the other Party with access to databases and associated signaling necessary for call routing and completion by providing SS7 CCS interconnection in accordance with existing Tariffs, and interconnection and access to toll free databases, LIDB, and any other necessary databases in accordance with existing Tariffs and/or agreements with other unaffiliated carriers.  Alternatively, either Party may secure CCS Interconnection from a commercial SS7 hub provider, and in that case the other Party will permit the purchasing Party to access the same databases as would have been accessible if the purchasing Party had connected via SS7 CCS directly to the other Party's CCS network.

11.1.5  Bell Atlantic shall permit MCIm to access Bell Atlantic's LIDB to validate calling card numbers and requests for bill-to-third-party or collect billing.  Bell Atlantic shall provide LIDB access at Parity and in a Non-Discriminatory manner by a SS7 formatted data query before call completion to determine the validity of the billing method requested by the caller.  LIDB will respond with a SS7 formatted confirmation of validity or denial of the requested billing option.

11.1.6 The Parties will provide CCS Signaling to one another, where and as available, in conjunction with all local traffic, toll traffic, meet point billing traffic, and transit traffic. The Parties will cooperate on the exchange of TCAP messages to facilitate interoperability of CCS-based features between their respective networks, including all CLASS features and functions, to the extent each Party offers such features and functions to its subscribers. All CCS signaling parameters will be provided upon request (where available), including called party number, Calling Party Number, originating line information, calling party category, and Charge Number. All privacy indicators will be honored. The Parties will follow all relevant OBF adopted guidelines~~standards~~ pertaining to                                   |
CIC/OZZ codes. Where CCS Signaling is not available, in-band multi-frequency ("MF") wink start signaling will be provided. Any such MF arrangement will require a separate local trunk circuit between the Parties' respective Switches. In such an arrangement, each Party will outpulse the full ten-digit telephone number of the called party to the other party with appropriate call set-up and ANI where available, at Parity.

11.1.7 The following publications describe the practices, procedures and specifications generally utilized by Bell Atlantic for signaling purposes and is listed herein to assist the Parties in meeting their respective interconnection responsibilities related to signaling:

11.1.7.1 Bellcore GR-905-CORE, Issue 1, March 1995, and subsequent issues and revisions;

11.1.7.2 Bell Atlantic Supplement Common Channel Signaling Network Interface Specification, Bell Atlantic-905, December 1990; Issue, Supplement 1, June 1992; Supplement 2, August 1992; Supplement 3, January 1993; and

11.1.7.3 Bell Atlantic AIN SMS Network Disclosure (Date: December 1996, on Bell Atlantic World Wide Web site).

11.1.8 Each Party shall charge the other Party mutual and reciprocal rates for CCS Signaling as follows: Bell Atlantic shall charge MCIm in accordance with Attachment I hereto and applicable Tariffs; MCIm shall charge Bell Atlantic rates equal to the rates Bell Atlantic charges MCIm, unless MCIm's Tariffs for CCS signaling provide for lower generally available rates, in which case MCIm shall charge Bell Atlantic such lower rates.

11.1.9 MCIm must meet interconnection certification testing requirements of the SS7 network before interconnection is permitted, and also before changes occur within the MCIm SS7 network.

*Section 12.  Signaling Transfer Points ("STPs")*

   12.1  **Definition:**

       12.1.1  Bell Atlantic's CCSAS allows interconnected carriers to exchange
       signaling information over a communications path which is separate from the
       message path.  The discretely rated network termination point where this
       interconnection takes place is called the Bell Atlantic STP port termination.
       Figure 1⁻ depicts STPs.                                                      |



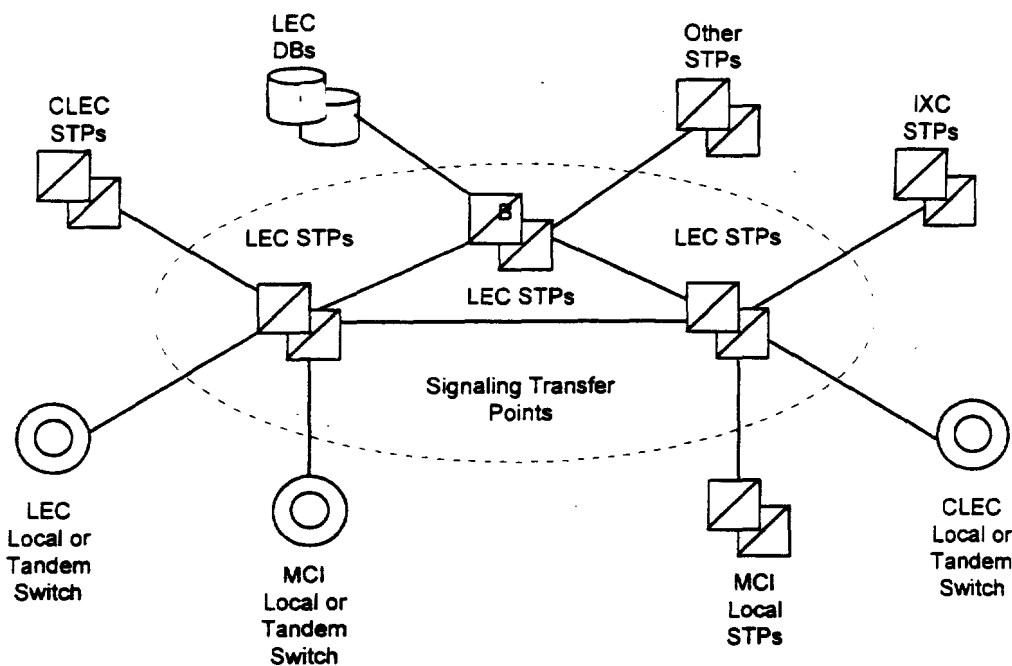**Figure 1⁻**                                                                        |

       12.1.2  Each CCSAS signaling connection provides for two-way digital
       transmission at speeds of 56 kbps.  The connection to Bell Atlantic's STP pair can
       be made from either the carrier's STP, which requires a minimum of two (2) 56
       kbps circuits, or from the carrier's STP pair, which requires a minimum of four
       (4) pairs of 56 kbps circuits.

       12.1.3  STP locations are set forth in National Exchange Carrier Association
       ("NECA") Tariff F.C.C. No. 4.  Carriers ordering CCSAS are subject to the
       technical requirements specified in Bell Atlantic Tariff F.C.C. No. 1, Sections
       2.3.9.1, 2.3.10 (B) (9) and 2.3.10 (9).  See Bell Atlantic Tariff F.C.C. No. 1,
       Section 6.4.3 (A) for testing and certification reference documentation).

## 12.2 **Technical Requirements**

12.2.1 STPs shall provide access to all other Network Elements connected to the Bell Atlantic network. These include:

> 12.2.1.1 Bell Atlantic Local Switching or Tandem Switching;

> 12.2.1.2 Bell Atlantic Service Control Points/databases;

> 12.2.1.3 Third-party local or Tandem Switching systems; and

> 12.2.1.4 Third-party-provided STPs.

12.2.2 The connectivity provided by STPs shall fully support the functions of all other Network Elements connected to the Bell Atlantic SS7 network. This explicitly includes the use of the Bell Atlantic SS7 network to convey messages which neither originate nor terminate at a signaling end point directly connected to the Bell Atlantic SS7 network (*i.e.*, transit messages). When the Bell Atlantic SS7 network is used to convey transit messages, there shall be no alteration of the integrated services digital network user part ("ISDNUP") or Transaction Capabilities Application Part ("TCAP") user data that constitutes the content of the message.

12.2.3 If a Bell Atlantic Tandem Switch routes calling traffic, based on dialed or translated digits, on SS7 trunks between an MCIm local Switch and third-party local Switch, Bell Atlantic's SS7 network shall convey the TCAP messages that are necessary to provide call management features (automatic callback, automatic recall, and screening list editing) between the MCIm local STPs and the STPs that provide connectivity with the third-party local Switch, even if the third-party local Switch is not directly connected to Bell Atlantic's STPs, providing that the third-party Switch is located in the same LATA.

12.2.4 In cases where the destination signaling point is a Bell Atlantic local or Tandem Switching system or database, or is an MCIm or third-party local or Tandem Switching system directly connected to Bell Atlantic's SS7 network, Bell Atlantic STPs shall perform final GTT of messages to the destination and SCCP Subsystem Management of the destination. In all other cases, STPs shall perform intermediate GTT of messages to a gateway pair of STPs in an SS7 network connected with the Bell Atlantic SS7 network, and shall not perform SCCP subsystem management of the destination.

## 12.3  Interface Requirements

12.3.1  Bell Atlantic shall provide the following STPs options to connect MCIm or MCIm-designated Local Switching systems or STPs to the Bell Atlantic SS7 network:

12.3.1.1  An A-link interface from MCIm Local Switching systems; and,

12.3.2  Each type of interface shall be provided by one or more sets (layers) of signaling links, as follows:

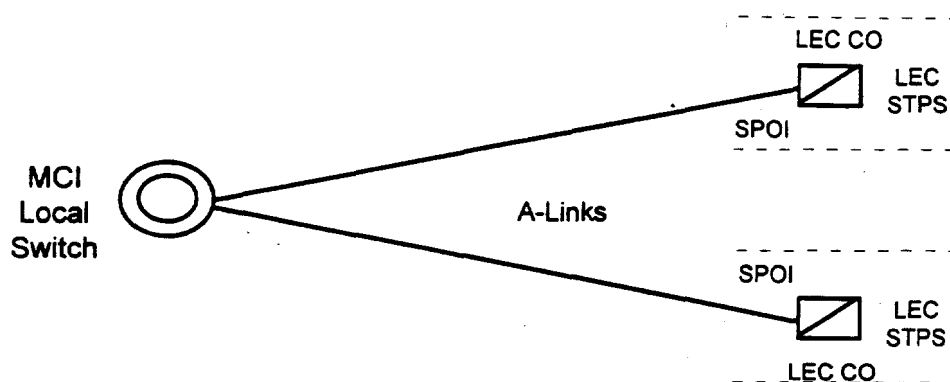12.3.2.1  An A-link layer shall consist of two links, as depicted in Figure 2-4.



**Figure 2-4.  A-Link Interface**

12.3.3  The Signaling Point of Interconnection ("SPOI") for each link shall be located at a cross-connect element, such as a DSX-1, in the Central Office where the Bell Atlantic STP is located.  There shall be a DS1 or higher rate transport interface at each of the SPOIs.  Each signaling link shall appear as a DS0 channel within the DS1 or higher rate interface.

## 12.4  Message Screening

12.4.1  Bell Atlantic shall set message screening parameters so as to accept messages from MCIm local or tandem switching systems destined to any signaling point in the Bell Atlantic SS7 network with which the MCIm switching system has a legitimate signaling relation.

12.4.2  Bell Atlantic shall set message screening parameters so as to accept messages from MCIm local or tandem switching systems destined to any

signaling point or network interconnected to the Bell Atlantic SS7 network with which the MCIm switching system has a legitimate signaling relation.

12.4.3  Bell Atlantic shall set message screening parameters so as to accept messages destined to an MCIm local or tandem switching system from any signaling point or network interconnected to the Bell Atlantic SS7 network with which the MCIm switching system has a legitimate signaling relation.

12.4.4  Bell Atlantic shall set message screening parameters so as to accept and send messages destined to an MCIm SCP from any signaling point or network interconnected to the Bell Atlantic SS7 network with which the MCIm SCP has a legitimate signaling relation, provided Bell Atlantic receives proper notification and agreement from the owner of such other networks.

## 12.5  STP Requirements

12.5.1  Bell Atlantic shall provide MTP and SCCP protocol interfaces in accordance with sections relevant to the MTP or SCCP in the following specifications:

12.5.1.1  Bellcore GR-905-CORE, Issue 1, March 1, Common Channel Signaling Network Interface Specification ("CCSNIS") Supporting Network Interconnection, Message Transfer Part ("MTP"), and Integrated Services Digital Network User Part ("ISDNUP").~~and~~

## Section 13.  Call Related Databases and AIN

### 13.1  Definition:

13.1.1  "Call Related Databases" are the Network Elements that provide the functionality for storage of, and access to, information required to route and complete a particular call. Call Related Databases include, but are not limited to: LIDB, Toll Free Number Database, Calling Name database, number portability databases, 911 and E911 databases, and AIN databases.

13.1.2  A Service Control Point ("SCP") is a specific type of database Network Element deployed in a Signaling System 7 ("SS7") network that executes service application logic in response to SS7 queries sent to it by a switching system also connected to the SS7 network.

### 13.2  Technical Requirements for Call Related Databases

Requirements for Call Related Databases within this section address storage of information, access to information (e.g., signaling protocols, response times), and administration of information (e.g., provisioning, administration, and maintenance). All

Call Related Databases shall be provided to MCIm in accordance with the following requirements, except where such a requirement is superseded by specific requirements set forth in Subsections 13.3 through 13.6⁵:

13.2.1 Bell Atlantic shall provide physical interconnection to SCPs through the SS7 network and protocols, as specified in Section 12 of this Attachment, with TCAP as the application layer protocol.

13.2.2 Bell Atlantic shall provide physical interconnection to databases via existing interfaces and industry standard interfaces and protocols (*e.g.*, 56 Kb TCP/IP).

13.2.3 The reliability of interconnection options shall be consistent with requirements for diversity and survivability as specified in Section 12 of this Attachment (which applies to both SS7 and non-SS7 interfaces).

13.2.4 Call Related Database functionality shall be available at Parity. If, based on information available through the process set forth in Section 3, MCIm believes the functionality is inadequate to meet its needs, it may initiate a BFR.

13.2.5 Bell Atlantic shall complete database transactions (*i.e.*, add, modify, delete) for MCIm subscriber records stored in Bell Atlantic databases at Parity.

13.2.6 Bell Atlantic shall provide database maintenance consistent with the maintenance requirements as specified in this Agreement (*e.g.*, notification of Bell Atlantic network affecting events, testing).

13.2.7 Bell Atlantic shall provide billing and recording information to track database usage consistent with connectivity billing and recording requirements for Call Related Databases as specified in this Agreement (*e.g.*, recorded message format and content, timeliness of feed, data format and transmission medium).

13.2.8 Bell Atlantic shall provide Call Related Databases in accordance with the physical security requirements specified in this Agreement.

13.2.9 Bell Atlantic shall provide Call Related Databases in accordance with the logical security requirements specified in this Agreement.

### 13.3 Line Information Database ("LIDB")

This Subsection 13.3 defines and sets forth additional requirements for the Line Information Database. This Subsection 13.3 supplements the requirements of Subsection 13.2 and 13.5.

13.3.1 **Definition:**

LIDB is a transaction-oriented database accessible through CCS networks. It contains records associated with subscriber line numbers and special billing numbers (in accordance with the requirements in the technical reference in GR-1158-CORE OSSGR, Section 22.3). LIDB accepts queries from other Network Elements, or MCIm's network, and provides appropriate responses. The query originator need not be the owner of LIDB data. LIDB queries include functions such as screening billed numbers that provides the ability to accept collect or third number billing calls and validation of telephone line number based non-proprietary calling cards. The interface for the LIDB functionality is the interface between the Bell Atlantic CCS network and other CCS networks. LIDB also interfaces to administrative systems. The administrative system interface provides Bell Atlantic work centers with an interface to LIDB for functions such as provisioning, auditing of data, access to LIDB measurements and reports.

### 13.3.2 Technical Requirements

13.3.2.1 Prior to the availability of a long-term solution for NP, Bell Atlantic shall enable MCIm to store in Bell Atlantic's LIDB any subscriber line number or special billing number record, (in accordance with the technical reference in GR-1158-CORE OSSGR, Section 22.3) whether ported or not, for which the NPA-NXX or NXX-0/1XX group is supported by that LIDB.

13.3.2.2 Prior to the availability of a long-term solution for NP, Bell Atlantic shall enable MCIm to store in Bell Atlantic's LIDB any subscriber line number or special billing number (in accordance with the technical reference in GR-1158-CORE OSSGR, Section 22.3) record, whether ported or not, and NPA-NXX and NXX-0/1XX Group Records, belonging to an NPA-NXX or NXX-0/1 XX assigned to MCIm.

13.3.2.3 Subsequent to the availability of a long-term solution for NP, Bell Atlantic shall enable MCIm to store in Bell Atlantic's LIDB any subscriber line number or special billing number (in accordance with the technical reference in GR-1158-CORE OSSGR, Section 22.3) record, whether ported or not, regardless of the number's NPA-NXX or NXX-0/1XX.

13.3.2.4 Bell Atlantic shall perform the following LIDB functions (*i.e.*, processing of the following query types as defined in the technical reference in GR-1158-CORE OSSGR, Section 22.3) for MCIm's subscriber records in LIDB:

13.3.2.4.1 Billed number screening (provides information such as whether the billed number may accept collect or third number billing calls); and

13.3.2.4.2 Calling card validation.

13.3.2.5 Bell Atlantic shall process MCIm's subscriber records in LIDB at least at Parity with Bell Atlantic subscriber records, with respect to other LIDB functions (as defined in the technical reference in GR-1158-CORE OSSGR, Section 22.3). Bell Atlantic shall indicate to MCIm what additional functions (if any) are performed by LIDB in Bell Atlantic's network.

13.3.2.6 Within two (2) weeks after a request by MCIm, Bell Atlantic shall provide MCIm with a list of the subscriber data items which MCIm would have to provide in order to support billed number screening and calling card validation. The list shall indicate which data items are essential to LIDB function, and which are required only to support certain services. For each data item, the list shall show the data formats, the acceptable values of the data item and the meaning of those values.

13.3.2.7 Bell Atlantic shall provide LIDB systems with rates of operating deficiencies at Parity. If, based on information available through the process set forth in Section 3, MCIm believes that the rate of deficiencies is inadequate to meet its needs, it may initiate a BFR.

13.3.2.8 Bell Atlantic shall provide MCIm with the capability to provision (*e.g.*, to add, update, and delete) NPA-NXX and NXX-0/1XX group records, and line number and special billing number records, associated with MCIm subscribers, directly into Bell Atlantic's LIDB provisioning process.

13.3.2.9 As directed by MCIm or the new local service provider, in the event that end user subscribers change their local service provider, Bell Atlantic shall maintain subscriber data (for line numbers, card numbers, and for any other types of data maintained in LIDB), as mutually agreed by the Parties, so that such subscribers shall not experience any interruption of service, except for any interruption associated with a LIDB-only service order transaction at Parity.

13.3.2.10 All additions and updates of MCIm data to the LIDB shall be solely at the direction of MCIm. Bell Atlantic will process orders from other CLECs or from Bell Atlantic for subscribers that choose to migrate from MCIm to another provider.

13.3.2.11 Bell Atlantic shall provide priority updates to LIDB for MCIm data upon MCIm's request (*e.g.*, to support fraud protection) at Parity.

13.3.2.12 Bell Atlantic shall accept queries to LIDB associated with MCIm subscriber records, and shall return responses in accordance with the requirements of this Section 13.

## 13.4 Toll Free Number Database

The "Toll Free Number Database" is an SCP that provides functionality necessary for toll free (*e.g.*, 800 and 888) number services by providing routing information and additional features during call set-up in response to queries from SSPs. This Subsection 13.4 supplements the requirements of Subsection 13.2 and 13.5. Bell Atlantic shall provide the Toll Free Number Database in accordance with the following:

### 13.4.1 Technical Requirements

13.4.1.1 Bell Atlantic shall make the Bell Atlantic Toll Free Number Database available for MCIm to query, from MCIm's designated switch including Local Switching, with a toll-free number and originating information.

13.4.1.2 The Toll Free Number Database shall return carrier identification and, where applicable, the queried toll free number, translated numbers and instructions as it would in response to a query from a Bell Atlantic switch.

### 13.4.2 Interface Requirements

The signaling interface between the MCIm or other local switch and the Toll Free Number Database shall use the TCAP protocol as specified in Part A, Section 15 (Technical References), together with the signaling network interface as specified in Part A, Section 15 (Technical References).

## 13.5 Advanced Intelligent Network ("AIN") Access, Service Creation Environment and Service Management System ("SCE/SMS") Advanced Intelligent Network Access

13.5.1 Bell Atlantic shall provide access to any and all Bell Atlantic service applications resident in Bell Atlantic's SCP. Such access may be from MCIm's switch or Bell Atlantic's unbundled local switch.

13.5.2 SCE/SMS AIN access shall provide MCIm the ability to create service applications in the Bell Atlantic SCE and deploy those applications via the Bell Atlantic SMS to the Bell Atlantic SCP. This interconnection arrangement shall

provide MCIm access to the Bell Atlantic development environment in a manner at least at Parity with Bell Atlantic's ability to deliver its own AIN-based services. SCE/SMS AIN Access is the creation and provisioning of AIN services in the Bell Atlantic network. See Figure 3÷ below.
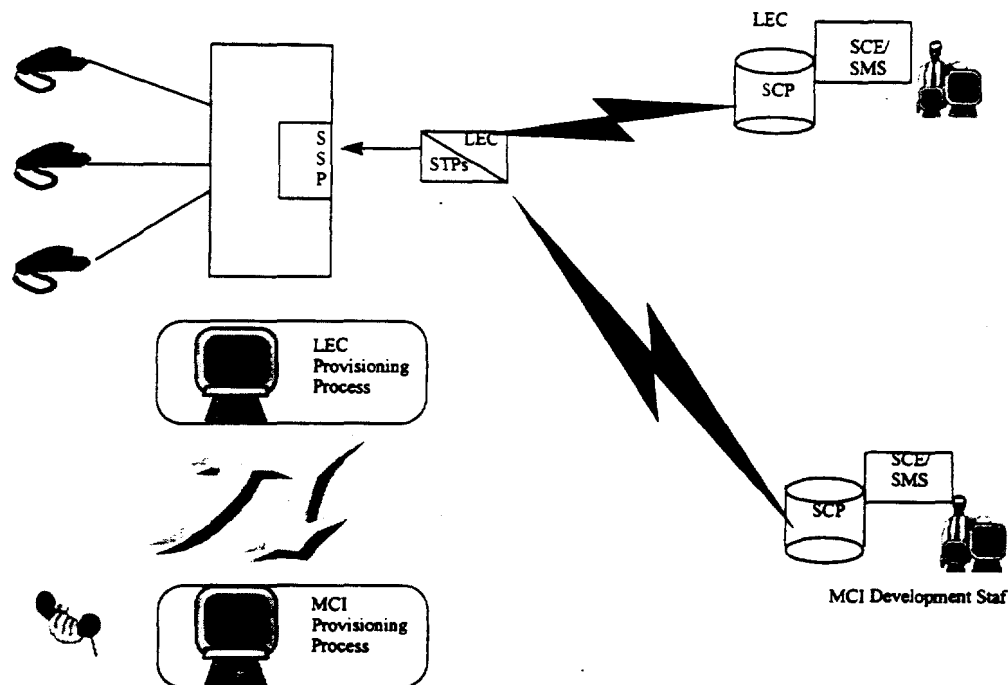


**Figure ÷3**

13.5.3  Bell Atlantic shall make SCE hardware, software, testing and technical support (e.g., help desk, system administrator) resources available to MCIm. Scheduling of SCE resources shall allow MCIm at least equal priority to Bell Atlantic.

13.5.4  The Bell Atlantic SCE/SMS shall allow for multi-user access. Source code (i.e., AIN service applications and process flow design developed by an MCIm service designer/creator to provide AIN based services) management and other logical security functions will be provided.

13.5.5  Bell Atlantic shall provide reasonable protection to MCIm service logic and data from unauthorized access, execution or other types of compromise.

13.5.6  Bell Atlantic or a designated vendor shall provide for service creation training, documentation, and technical support of MCIm development staff at Parity with that provided to Bell Atlantic's own development staff. Training

sessions shall be "suitcased" to MCIm facilities or delivered at Bell Atlantic facilities at MCIm's cost, at MCIm's discretion, subject to vendor's requirements.

13.5.7  When MCIm selects SCE/SMS AIN access, Bell Atlantic shall provide for a secure, controlled access environment on-site as well as via remote data connections (i.e., ISDN circuit switched data).

13.5.8  When MCIm selects SCE/SMS AIN access, Bell Atlantic shall allow MCIm to transfer data forms and/or tables to the Bell Atlantic SCP via the Bell Atlantic SMS (e.g., service customization and subscriber subscription) in a manner consistent with how Bell Atlantic provides that capability to itself.

13.5.9  When MCIm selects SCE/SMS AIN access for providing services on MCIm's network, the Parties will work cooperatively to resolve technical and provisioning issues.

13.6  **Calling Name (CNAM) Database.** The "CNAM Database" means the database in which Bell Atlantic stores subscriber information (including name and telephone number) used to show the customer name of an incoming call on a display attached to the telephone whether or not such database contains exclusively CNAM information. Bell Atlantic shall provide MCIm with access to Bell Atlantic's CNAM Database in accordance with the following:

13.6.1  Bell Atlantic shall provide to MCIm all subscriber records used by Bell Atlantic to create and maintain its CNAM database, in a Non-Discriminatory manner. MCIm may combine this Network Element with any other Network Element for the provision of any Telecommunications Service.

13.6.2  Bell Atlantic shall provide MCIm all ILEC, CLEC, and independent telco subscriber records used by Bell Atlantic within its CNAM database in a non-discrimatory manner. Bell Atlantic shall provide MCIm with a complete list of the ILECs, CLECs, and independent telcos whose subscriber information is contained in the Bell Atlantic CNAM database.

13.6.3  Upon MCIm's request, Bell Atlantic shall provide via electronic data transfer an initial load of subscriber records contained in its CNAM Database. The NPAs included must represent the entire Bell Atlantic operating territory in the State. The initial load shall reflect all data that is current as of one business day prior to the provision date.

13.6.4  On a daily basis, Bell Atlantic shall provide updates (end user and mass) to the CNAM Database information via electronic data transfer. Updates must be current as of one business day prior to the date provided to MCIm.

13.6.5 Bell Atlantic shall provide CNAM information at TELRIC-based rates and on the same terms and conditions that Bell Atlantic provides to itself, its Affiliates, or any third party.

13.6.6 Bell Atlantic shall provide a complete refresh of the CNAM information upon mutual agreement of Bell Atlantic and MCIm and subject to applicable charges set forth in Attachment I.

13.6.7 **Data Processing Requirements**: Bell Atlantic and MCIm shall mutually agree to standards on the following data processing requirements:

>13.6.7.1 Identify the type of tape to be used in sending the test and initial load data, e.g., reel or cartridge tape.

>13.6.7.2 Bell Atlantic shall, due to the size of an initial load, provide the records on magnetic tape and the daily update activity via electronic data transfer.

>13.6.7.3 Daily update information must be provided to MCIm on the same day as the change occurred through the electronic data transfer medium, NDM.

>13.6.7.4 Identify tape or dataset label requirements.

>13.6.7.5 Identify tracking information requirements, e.g., use of header and trailer records for tracking date and time, cycle numbers, sending and receiving site codes, volume count for the given tape/dataset.

## Section 14. Tandem Switching

### 14.1 Definition:

14.1.1 Tandem Switching includes trunk-connect facilities, the basic switching function of connecting trunks to trunks, and the functions that are centralized in tandem switches. Tandem Switching creates a temporary transmission path between interoffice trunks that are interconnected at a Bell Atlantic access tandem switch for the purpose of routing a call or calls.

### 14.2 Technical Requirements

14.2.1 Tandem Switching shall provide:

>14.2.1.1 Signaling to establish a tandem connection;

>14.2.1.2 Screening and routing at Parity;

14.2.1.3  To the extent Technically Feasible and at Parity, Tandem Switching shall provide recording of billable events;

14.2.1.4  Tandem Switching shall provide AIN triggers supporting AIN features at Parity with its provision of such triggers for Bell Atlantic subscribers;

14.2.1.5  Bell Atlantic's Tandem Switching shall provide access to toll free and Number Portability databases in the same manner as it provides such access to itself and its Bell Atlantic subscribers;

14.2.1.6  Tandem Switching shall provide all trunk interconnections, where available, in Bell Atlantic's access tandems; and

14.2.1.7  Tandem Switching shall accept connections (including the necessary signaling and trunking interconnections) between end offices, IXCs, ITCs, CAPs and CLEC switches that subtend/interconnect at the same tandem.

14.2.2  Tandem Switching shall provide local tandeming functionality between two End Offices that subtend/interconnect at the same tandem, including two offices belonging to different CLECs (*e.g.*, between an MCIm end office and the end office of another CLEC).

14.2.3  Tandem Switching shall preserve CLASS/LASS features and Caller ID as traffic is processed on SS7 trunk groups at Parity.  Additional signaling information and requirements are provided in Section 12.

14.2.4  Bell Atlantic shall perform routine testing and fault isolation on the underlying switch that is providing Tandem Switching and all its interconnections at Parity with its performance of such testing for its own subscriber services. When commonly available, the results of the testing shall be made immediately available to MCIm.

14.2.5  Tandem Switching shall control congestion using capabilities such as automatic congestion control and network routing overflow.  Congestion control provided or imposed on MCIm traffic shall be at Parity with controls being provided or imposed on Bell Atlantic traffic for itself and its subscribers.

14.2.6  Tandem Switching shall route calls to Bell Atlantic or MCIm endpoints or platforms for which Tandem Switching is provided.  For Tandem Switching with unbundled ~~Common~~Shared Transport, call routing including overflow is accomplished as Bell Atlantic's network normally routes the calls.  For Tandem

Switching with unbundled Dedicated Transport, specific routing may be requested through the BFR process.

14.2.7 Tandem Switching shall process originating toll-free traffic received from an MCIm local switch.

14.2.8 In support of AIN triggers and features, Tandem Switching shall provide SSP capabilities at Parity with Bell Atlantic's provision of these capabilities for its own subscribers under the same circumstances when these capabilities are not available from Local Switching.

14.2.9 The Local Switching and Tandem Switching functions may be combined in an office. If this is done, both Local Switching and Tandem Switching shall provide all of the functionality required of each of those Network Elements in this Agreement.

## 14.3 Interface Requirements

14.3.1 Tandem Switching shall interconnect, with direct trunks, to all carriers with which Bell Atlantic interconnects.

14.3.1.1 Transit traffic that is originated by an ITC or wireless carrier shall be settled in accordance with the terms of an appropriate IntraLATA Telecommunications Services Settlement Agreement between the Parties substantially in the form appended hereto as Exhibit H. Meet-Point Billing compensation arrangements as described in Section 3 of Attachment VIII shall be utilized for compensation for the joint handling of toll traffic.

14.3.1.2 Bell Atlantic expects that most networks involved in transit traffic will deliver each call to each involved network with CCS and the appropriate TCAP message to facilitate full interoperability of those services supported by Bell Atlantic and billing functions. In all cases, each Party shall follow the Exchange Message Record ("EMR") standard and exchange records between the Parties and with the terminating carrier to facilitate the billing process to the originating network.

14.3.1.3 Transit traffic to and from MCIm shall be routed over the traffic exchange trunks.

14.3.2 Bell Atlantic shall provide signaling necessary to provide Tandem Switching with feature functionality impacts and effects at Parity.

## Section 15. Additional Requirements

This Section 15 of Attachment III sets forth the additional requirements for Network Elements which Bell Atlantic agrees to offer to MCIm under this Agreement.

### 15.1  Cooperative Testing

#### 15.1.1  Definition:

"Cooperative Testing" means that both Bell Atlantic and MCIm shall cooperate with reasonable requests from the other to (i) ensure that the Network Elements and ancillary functions and additional requirements being provided to MCIm by Bell Atlantic are in compliance with the requirements of this Agreement, (ii) test the overall functionality of various Network Elements and ancillary functions provided by Bell Atlantic to MCIm in Combination with each other or in Combination with other equipment and facilities provided by MCIm or third-parties, (iii) test the overall functionality of services provided by third-parties involving or combining Network Elements provided by Bell Atlantic and services provided by MCIm, and (iv) ensure that billing data can be provided to MCIm and Bell Atlantic.

#### 15.1.2  Requirements

Within forty-five (45) days after the Effective Date of this Agreement, MCIm and Bell Atlantic will agree upon a process to resolve technical issues relating to interconnection of MCIm's network to Bell Atlantic's network and Network Elements and ancillary functions. The agreed upon process shall include procedures for escalating disputes and unresolved issues up through higher levels of each Party's management. If MCIm and Bell Atlantic do not reach agreement on such a process within forty-five (45) days, any issues that have not been resolved by the Parties with respect to such process shall be submitted to the procedures set forth in Part A, Section 24 (Dispute Resolution Procedures) of this Agreement unless both Parties agree to extend the time to reach agreement on such issues.

15.1.2.1  Where mutually agreed (e.g., POT bays in the common area associated with physical Collocation), Bell Atlantic shall provide MCIm access for testing MCIm facilities at interfaces between a Bell Atlantic Network Element, or at interfaces between a Bell Atlantic Combination, and MCIm equipment or facilities. This access shall be available seven (7) days per week, twenty-four (24) hours per day.

15.1.2.2  When mutually agreed, Bell Atlantic shall temporarily provision MCIm designated Local Switching features (e.g., customized routing) for testing. MCIm and Bell Atlantic shall mutually agree on the procedures to be established between Bell Atlantic and MCIm to expedite such provisioning processes for feature testing.

15.1.2.3  Upon reasonable request, Bell Atlantic and MCIm shall provide technical staff to meet with each other to provide required support for Cooperative Testing.

15.1.2.4  Dedicated Transport and UNE-Loop may experience alarm conditions due to in-progress tests. When an entire Bell Atlantic facility is dedicated to MCIm services, Bell Atlantic shall not remove such facility from service without obtaining MCIm's prior approval.

15.1.2.5  Bell Atlantic shall provide to MCIm electronic access to 105 type responders, 100-type test lines, or 102-type test lines associated with any circuits under test.

15.1.2.6  MCIm and Bell Atlantic shall endeavor to complete Cooperative Testing as stated in Attachment VIII.

15.1.2.7  MCIm may accept or reject the Network Element ordered by MCIm if, upon completion of cooperative acceptance testing, the tested Network Element does not meet the requirements stated in applicable technical references included in Appendix 1 (Technical Reference Schedule) of Part A.

## 15.2  Protection, Restoration, and Disaster Recovery

### 15.2.1  Scope

This Section refers specifically to requirements on the use of redundant network equipment and facilities for protection, restoration, and disaster recovery.

### 15.2.2  Requirements

15.2.2.1  Bell Atlantic shall provide protection, restoration, and disaster recovery capabilities at Parity with those capabilities provided for their own services, facilities and equipment (*e.g.*, equivalent circuit pack protection ratios, facility protection ratios).

15.2.2.2  Bell Atlantic shall provide Network Elements equal priority in protection, restoration, and disaster recovery as provided to their own services, facilities and equipment.

15.2.2.3  Bell Atlantic shall provide Network Elements equal priority in the use of spare equipment and facilities as provided to their own services, facilities and equipment.

15.2.2.4 Bell Atlantic shall restore Network Elements which are specific to MCIm end user subscribers on a priority basis as MCIm may designate at Parity.

## 15.3 Synchronization

### 15.3.1 Definition:

"Synchronization" is the function which keeps all digital equipment in a communications network operating at the same average frequency. With respect to digital transmission, information is coded into discrete pulses. When these pulses are transmitted through a digital communications network, all synchronous Network Elements are traceable to a stable and accurate timing source. Network synchronization is accomplished by timing all synchronous Network Elements in the network to a stratum 1 source so that transmission from these network points have the same average line rate.

### 15.3.2 Technical Requirements

The following requirements are applicable to the case where Bell Atlantic provides synchronization services to equipment that MCIm owns and operates within a Bell Atlantic location. In addition, these requirements apply to synchronous equipment that is owned by Bell Atlantic and is used to provide a Network Element to MCIm. Synchronization services by Bell Atlantic shall be subject to rates and charges to be determined.

15.3.2.1 The synchronization of clocks within digital networks is divided into two parts: intra-building and inter-building. Within a building, a single clock is designated as the building integrated timing supply ("BITS"), which provides all of the DS1 and DS0 synchronization references required by other clocks in such building. This is referred to as intra-building synchronization. The BITS receives synchronization references from remotely located BITS. Synchronization of BITS between buildings is referred to as inter-building synchronization.

15.3.2.2 To implement a network synchronization plan, clocks within digital networks are divided into four stratum levels. All clocks in strata 2, 3, and 4 are synchronized to a stratum 1 clock, that is, they are traceable to a stratum 1 clock. A traceable reference is a reference that can be traced back through some number of clocks to a stratum 1 source. Clocks in different strata are distinguished by their free running accuracy or by their stability during trouble conditions such as the loss of all synchronization references.

15.3.2.2.1 **Intra-Building**

15.3.2.2.1.1 Within a building, there may be different kinds of equipment that require synchronization at the DS1 and DS0 rates. Synchronization at the DS1 rate is accomplished by the frequency synchronizing presence of buffer stores at various DS1 transmission interfaces. Synchronization at the DS0 rate is accomplished by using a composite clock signal that phase synchronizes the clocks. Equipment requiring DS0 synchronization frequently does not have adequate buffer storage to accommodate the phase variations among different equipment. Control of phase variations to an acceptable level is accomplished by externally timing all interconnecting DS0 circuits to a single clock source and by limiting the interconnection of DS0 equipment to less than 1,500 cable feet. Therefore, a BITS shall provide DS1 and composite clock signals when the appropriate composite signal is a 64-kHz 5/8$^{th}$ duty cycle, return to zero with a bipolar violation every eighth pulse ("B8RZ").

### 15.3.2.2.2 Inter-Building

15.3.2.2.2.1 Bell Atlantic shall provide inter-building synchronization at the DS1 rate, and the BITS shall accept the primary and secondary synchronization links from BITS in other buildings. From hierarchical considerations, the BITS shall be the highest stratum clock within the building and Bell Atlantic shall provide operations capabilities (this includes, but is not limited to: synchronization reference provisioning; synchronization reference status inquiries; timing mode status inquiries; and alarm conditions).

## 15.3.3 Synchronization Distribution Requirements

15.3.3.1 Central Office BITS shall contain redundant clocks meeting or exceeding the requirements for a stratum 3 enhanced clock as specified in ANSI T1.101-1994 and Bellcore *GR-1244 Clocks for the Synchronized Network: Common Genetic Criteria.*

15.3.3.2 Central Office BITS shall be powered by primary and backup power sources.

15.3.3.3 If both reference inputs to the BITS are interrupted or in a degraded mode (meaning off frequency greater than twice the minimum

accuracy of the BITS, loss of frame, excessive bit errors, or in alarm indication signal), then the stratum clock in the BITS shall provide the necessary bridge in timing to allow the network to operate without a frame repetition or deletion (slip free) with better performance than 1 frame repetition or deletion (slip) per week.

15.3.3.4 DS1s multiplexed into a SONET synchronous payload envelope within an STS-n (where n is defined in ANSI T1.105-1995) signal shall not be used as reference facilities for network synchronization.

15.3.3.5 The total number of Network Elements cascaded from the stratum 1 source shall be minimized.

15.3.3.6 A Network Element shall receive the synchronization reference signal only from another Network Element that contains a clock of equivalent or superior quality (stratum level).

15.3.3.7 Bell Atlantic shall select for synchronization those facilities shown to have the greatest degree of availability (absence of outages).

15.3.3.8 Where possible, all primary and secondary synchronization facilities shall be physically diverse (this means the maximum feasible physical separation of synchronization equipment and cabling).

15.3.3.9 No timing loops shall be formed in any combination of primary and secondary facilities.

15.3.3.10 An operations support system ("OSS") shall continuously monitor the BITS for synchronization related failures or degradation.

15.3.3.11 An OSS shall continuously monitor all equipment transporting synchronization facilities for synchronization related failures or degradation.

15.3.3.12 For non-SONET equipment, Bell Atlantic shall provide synchronization facilities which, at a minimum, comply with the standards set forth in ANSI T1.101-1994.

15.3.3.13 All equipment approved for deployment in Bell Atlantic's network shall meet Bellcore GR-253 and GR-1244 requirements.

*Section 16. Basic 911 and E911*

See Attachment VIII, Section 6.1.1.

## *Section 17. Directory Assistance Data*

See Attachment VIII, Section 6.1.7.

# EXHIBIT A

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# EXHIBIT B

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